
EXHIBIT 3

James A. Cooper, Ph.D.

May 11, 2023

IN THE UNITED STATES DISTRICT COURT
FOR THE DISTRICT OF TEXAS
WACO DIVISION

THE TRUSTEES OF PURDUE
UNIVERSITY,

Plaintiff,

vs. Civil Action No. 6:21-CV-00727-ADA

STMICROELECTRONICS
INTERNATIONAL N.V. and
STMICROELECTRONICS, INC.,

Defendants.

VIDEOTAPED DEPOSITION OF JAMES A. COOPER, Ph.D.

May 11, 2023

8:02 a.m.

100 Sandoval Street
Santa Fe, New Mexico

PURSUANT TO THE FEDERAL RULES OF CIVIL
PROCEDURE, this deposition was:

TAKEN BY: MR. MIKE BETTINGER
Attorney For Defendants

REPORTED BY: Peggy Jo Gonzales, RMR, CCR #145
Bean & Associates, Inc.
Professional Court Reporting Service
201 Third Street, Northwest, Suite 1630
Albuquerque, New Mexico 87102

(8287N-PJ)

1 (Exhibit 30 marked.)

2 Q. (By Mr. Bettinger) Thirty. And for the
3 record, 30 is a document entitled "Optimum Design of
4 Short-Channel 4H-SiC Power DMOSFETs," bearing Bates
5 numbers PU00023610 through 12.

6 A. One three.

7 Q. One three. You're good at that. I should
8 let you do the last page every time. Thank you, sir.
9 I'll start it, you finish it.

10 Okay, placing before you Exhibit 30, is
11 that a document you recognize?

12 A. Yes.

13 Q. And does that -- is this a paper that was
14 presented at the 2005 11th International Conference
15 On Silicon Carbide and Related Materials?

16 A. I believe so, yes.

17 Q. All right.

18 Did you assist in the drafting of this
19 paper?

20 A. Yes.

21 Q. All right.

22 And did you review it before it was
23 submitted?

24 A. I'm sure I did.

25 Q. And was it accurate at the time you

1 submitted it?

2 A. To -- I'm sure I would have said so at the
3 time or I would have not submitted it.

4 Q. Okay.

5 In the abstract, you say "Three new
6 structural features are employed: A current
7 spreading layer (CSL) below the P-well, (2) a
8 heavily-doped, narrow JFET region, and (3) a
9 segmented P-well contact." Do you see that?

10 A. Yes.

11 Q. Is that what you saw as the advantages of
12 your 633 patent, those three points?

13 A. No.

14 Q. Well, there's reference in there to "We
15 optimized design of 1,000 volt short-channel 4H-SiC
16 power DMOSFET obtained from numerical simulations
17 using Taguchi method. Do you see that?

18 A. Well, I haven't found it, but yes.

19 Q. Oh. It's in the abstract.

20 A. Okay.

21 Q. Yeah. You see it?

22 A. Okay, let me find it.

23 Q. First sentence of the abstract.

24 A. Oh, the abstract, sorry. I was on the
25 introduction.

1 Q. Yeah.

2 A. Yes.

3 Q. Taguchi method, that's what Saha used in
4 her thesis, right?

5 A. That's correct.

6 Q. Isn't that what this is referring to,
7 what --

8 A. Yeah.

9 Q. And isn't that the subject of the 633
10 patent --

11 A. No.

12 Q. -- Saha's work?

13 A. No, the Taguchi method and the optimized
14 design, neither of them are the subject of the 633
15 patent.

16 Q. Okay, my -- perhaps I misspoke. Aren't
17 those the subject of the Saha thesis?

18 A. Yeah, they're involved in the Saha thesis,
19 included in the Saha thesis.

20 Q. And didn't we look earlier today that you
21 cited to the Saha thesis proposal as document
22 "Detailed Description of the Invention"? And I'm
23 referring now to Exhibit 3.

24 A. That's the proposal. Yeah. The proposal
25 didn't contain the numerical simulations.

1 Q. I see.

2 Well, for the 633 patent, there was -- for
3 claim 9, at least, there was no CSL layer claimed,
4 correct?

5 A. That's correct.

6 Q. There was no heavily-doped JFET region
7 claimed, was there?

8 A. Claim 9 doesn't speak to the doping.

9 Q. There was a parameters-free JFET region in
10 claim 9, correct?

11 A. There was a width parameter.

12 Q. Yes.

13 And there were segmented P-well contacts
14 referenced in --

15 A. I believe so, yes.

16 Q. And then if you could in Exhibit 30, if you
17 could turn to the page 2 -- 23613, or the last page
18 of the document. And you see Figure 9?

19 A. Yes, I do.

20 Q. It says that's a "Layout of a DMOSFET with
21 discontinuous segmented p-base contacts," right?

22 A. Right.

23 Q. Okay, so is this what Saha was working on?

24 A. Yes, um-hum.

25 Q. So if we're looking at this, the base

1 contacts, which are -- in this copy appear to be a
2 light pink --

3 A. Um-hum.

4 Q. -- those are the base contacts?

5 A. Correct.

6 Q. Is that what, in 633, refers to as islands?

7 A. I think so, yes.

8 Q. Okay, and then the blue is the source
9 contact, correct?

10 A. That's what it's labeled, yeah.

11 Q. And this is using that interdigitated
12 finger design that the researchers at Purdue were
13 using at the time, correct?

14 A. That would -- that would be likely the
15 case, yes.

16 Q. Okay.

17 MR. BETTINGER: Let's mark as 31 a document
18 entitled "A 1-kV" -- or 1,000 volt -- "4H-SiC Power
19 DMOSFET Optimized for Low On-Resistance, bearing
20 Bates numbers PU20586 through 591.

21 (Exhibit 31 marked.)

22 Q. (By Mr. Bettinger) Is this a paper that you
23 and Dr. Saha wrote?

24 A. It is, yes.

25 Q. Okay.

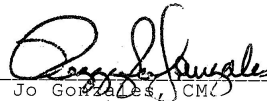
May 11, 2023

1 I FURTHER CERTIFY that the recoverable cost of
2 the original and one copy of the deposition,
3 including exhibits, to MR. MIKE BETTINGER is
4 \$_____.

5 I FURTHER CERTIFY that I did administer the oath
6 to the witness herein prior to the taking of this
7 deposition; that I did thereafter report in
8 stenographic shorthand the questions and answers set
9 forth herein, and the foregoing is a true and correct
10 transcript of the proceeding had upon the taking of
11 this deposition to the best of my ability.

12 I FURTHER CERTIFY that I am neither employed by
13 nor related to nor contracted with (unless excepted
14 by the rules) any of the parties or attorneys in this
15 case, and that I have no interest whatsoever in the
16 final disposition of this case in any court.

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Peggy Jo Gonzales, CMR

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